

CLAIMS

1. A light emitting device comprising:

a light emitting element, a bipolar transistor, an operational amplifier, a driver circuit, a first resistor, a second resistor, a third resistor, and a fourth resistor,

5 wherein the bipolar transistor has a base terminal connected to an output terminal of the operational amplifier and a collector terminal connected to a low power potential,

wherein the first resistor has one terminal connected to a first high power potential and the other terminal connected to a first input terminal of the operational
10 amplifier,

wherein the second resistor has one terminal connected to the first input terminal of the operational amplifier and the other terminal connected to the emitter terminal of the bipolar transistor,

wherein the third resistor has one terminal connected to the second high power potential and the other terminal connected to a second input terminal of the operational
15 amplifier,

wherein the fourth resistor has one terminal connected to a second input terminal of the operational amplifier and the other terminal connected to a low power potential,

20 wherein a potential from the emitter terminal of the bipolar transistor and the other terminal of the second resistor is supplied as a low power potential of a buffer of the driver circuit, and

wherein the second high power potential is supplied as a high power potential of the buffer.

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2. The light emitting device according to claim 1, wherein the light emitting element is an EL element.

3. The light emitting device according to claim 1, wherein the light
30 emitting device is provided over a semiconductor substrate.

4. The light emitting device according to claim 1, wherein the light emitting device is provided over a glass substrate.

5 5. The light emitting device according to claim 1, wherein the light emitting device is provided over a flexible substrate,

6. The light emitting device according to claim 1, wherein the light emitting device is provided over an SOI substrate.

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7. The light emitting device according to claim 1, wherein the light emitting device includes a thin film transistor.

8. An IC card, an IC tag, an RFID, a transponder, paper money,
15 securities, a passport, an electronic device, a bag, clothes each of which includes the light emitting device according to claim 1.

9. A light emitting device comprising:

a light emitting element, an operational amplifier, a driver circuit, a first
20 resistor, a second resistor, a third resistor, and a fourth resistor,

wherein the first resistor has one terminal connected to a first high power potential and the other terminal connected to a first input terminal of the operational amplifier,

wherein the second resistor has one terminal connected to the first input
25 terminal of the operational amplifier and the other terminal connected to an output terminal of the operational amplifier,

wherein the third resistor has one terminal connected to a second high power potential and the other terminal connected to a second input terminal of the operational amplifier,

30 wherein the fourth resistor has one terminal connected to the second input

terminal of the operational amplifier and the other terminal connected to a low power potential,

wherein a potential of the other terminal of the second resistor is supplied as a lower power potential of a buffer, and

5 wherein the second high power potential is supplied as a higher power potential of the buffer.

10 10. The light emitting device according to claim 9, wherein the light emitting element is an EL element.

11. The light emitting device according to claim 9, wherein the light emitting device is provided over a semiconductor substrate.

15 12. The light emitting device according to claim 9, wherein the light emitting device is provided over a glass substrate.

13. The light emitting device according to claim 9, wherein the light emitting device is provided over a flexible substrate,

20 14. The light emitting device according to claim 9, wherein the light emitting device is provided over an SOI substrate.

25 15. The light emitting device according to claim 9, wherein the light emitting device includes a thin film transistor.

16. An IC card, an IC tag, an RFID, a transponder, paper money, securities, a passport, an electronic device, a bag, clothes each of which includes the light emitting device according to claim 9.

30 17. A light emitting device comprising:

a bipolar transistor having a base terminal, and a collector terminal and an emitter terminal;

a circuit having an operational amplifier, a first resistor, a second resistor, a third resistor, a fourth resistor; and

5 a driver circuit having a buffer,

wherein the operational amplifier has an output terminal, a first input terminal and a second input terminal,

wherein the base terminal is connected to the output terminal of the operational amplifier and the collector terminal is connected to a low power
10 potential,

wherein the first resistor has one terminal connected to a first high power potential and the other terminal connected to the first input terminal of the operational amplifier,

wherein the second resistor has one terminal connected to the first
15 input terminal of the operational amplifier and the other terminal connected to the emitter terminal of the bipolar transistor,

wherein the third resistor has one terminal connected to a second high power potential and the other terminal connected to the second input terminal of the operational amplifier,

20 wherein the fourth resistor has one terminal connected to the second input terminal of the operational amplifier and the other terminal connected to a low power potential,

wherein a potential from the emitter terminal of the bipolar transistor and the other terminal of the second resistor is equal to a low
25 power potential of the buffer of the driver circuit, and

wherein the second high power potential is equal to as a high power potential of the buffer.

18. The light emitting device according to claim 17, wherein the light
30 emitting device is provided over a semiconductor substrate.

19. The light emitting device according to claim 17, wherein the light emitting device is provided over a glass substrate.

5 20. The light emitting device according to claim 17, wherein the light emitting device is provided over a flexible substrate,

21. The light emitting device according to claim 17, wherein the light emitting device is provided over an SOI substrate.

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22. The light emitting device according to claim 17, wherein the light emitting device includes a thin film transistor.

23. An IC card, an IC tag, an RFID, a transponder, paper money,
15 securities, a passport, an electronic device, a bag, clothes each of which includes the light emitting device according to claim 17.

24. A light emitting device comprising:

20 a circuit having an operational amplifier, a first resistor, a second resistor, a third resistor, a fourth resistor; and

a driver circuit having a buffer,

wherein the operational amplifier has an output terminal, a first input terminal and a second input terminal,

25 wherein the first resistor has one terminal connected to a first high power potential and the other terminal connected to the first input terminal of the operational amplifier,

wherein the second resistor has one terminal connected to the first input terminal of the operational amplifier and the other terminal connected to the output terminal of the operational amplifier,

30 wherein the third resistor has one terminal connected to a second

high power potential and the other terminal connected to the second input terminal of the operational amplifier,

wherein the fourth resistor has one terminal connected to the second input terminal of the operational amplifier and the other terminal connected
5 to a low power potential,

wherein a potential of the other terminal of the second resistor is equal to a lower power potential of a buffer, and

wherein the second high power potential is equal to as a higher power potential of the buffer.

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25. The light emitting device according to claim 24, wherein the light emitting device is provided over a semiconductor substrate.

26. The light emitting device according to claim 24, wherein the light
15 emitting device is provided over a glass substrate.

27. The light emitting device according to claim 24, wherein the light emitting device is provided over a flexible substrate,

20 28. The light emitting device according to claim 24, wherein the light emitting device is provided over an SOI substrate.

29. The light emitting device according to claim 24, wherein the light emitting device includes a thin film transistor.

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30. An IC card, an IC tag, an RFID, a transponder, paper money, securities, a passport, an electronic device, a bag, clothes each of which includes the light emitting device according to claim 24.

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